

Appl. No. 10/074,954
Amdt. dated Jan. 04/2004
Reply to Office action of Nov. 4, 2003

Amendments to the Specification

Please replace the abstract of the disclosure with the following amended abstract:

An apparatus for solving an edge exclusion problem when polishing a semiconductor wafer ~~comprising~~ includes a rotatable polishing platen ~~having an upper~~ surface, with a polishing pad ~~fixedly~~ attached to ~~[[the]]~~ its upper surface~~[[, a]]~~ . A polishing slurry ~~containing a mechanical abrasive~~ is deposited on the upper surface of the polishing pad during polishing. Mounted above the polishing pad is a rotatable polishing head for holding a substrate assembly, having a shallow recessed face adapted to ~~centrally hold the upper back surface of the substrate, the recessed face is oriented~~ substantially parallel to the upper surface of the polishing platen. ~~The rotatable polishing head assembly has its rotatable axis offset relative to the rotatable axis of the polishing platen.~~ A non-rotary cylindrical actuator assembly is coaxially oriented about the outer edge of the rotatable polishing head assembly, with a A ditched ring is removably attached to the bottom surface of the cylindrical actuator assembly. ~~The ditched ring also~~ has a bottom section of a ~~reduced wall thickness of approximately 5 mm.~~ A multiplicity of conduit grooves are formed in the bottom section of the ditched ring that allows a boundary layer of abrasive the polishing slurry to travel unimpeded ~~[[to]]~~ beneath the rotating semiconductor wafer. ~~[[The]]~~ A reduced wall thickness at the bottom of the ditched ring is configured to displace wrinkles from the outer edge of the wafer to the outer periphery of the ditched ring . This solves the edge exclusion problem, while the ~~concentric conduit grooves allow unimpeded tracks of abrasive slurry to uniformly~~ remove microscratches from the planarized surface of the wafer permitting polishing slurry to pass under the wafer.